

RESPONSE TO OFFICE ACTION  
S/N 09/905,513  
Page 12 of 19

### REMARKS

This response is intended as a full and complete response to the Office Action dated June 11, 2003. In view of the amendments and the following discussion, the Applicant believes that all claims are in allowable form.

### ELECTION OF CLAIMS

The Applicant confirms the election of claims 1-27. Claims 28-45 have been cancelled without prejudice. The Applicant reserves the right to file continuing and/or divisional applications to prosecute the non-elected subject matter.

### INFORMATION DISCLOSURE STATEMENT

The Applicant has resubmitted United States Patent Application Serial No. 09/912,578 for consideration by the Examiner. This reference was previously submitted and not considered by the Examiner. Consideration of this reference is respectfully requested.

### CLAIMS 8, 12 AND 21

The Applicant has amended claims 8, 12 and 21 to correct minor grammatical errors. The Applicant submits that the scope of claims 8, 12 and 21 remains unchanged.

### CLAIM REJECTIONS

#### **A. 35 U.S.C. §102(b) Claims 1-4 and 9-10**

Claims 1-4 and 9-10 stand rejected as being anticipated by United States Patent No. 6,080,291 issued June 27, 2000 to *Woodruff et al.*, (hereinafter referred to as "*Woodruff*"). In response, the Applicant has amended claim 1 to more clearly recite aspects of the invention. Claim 2 has been cancelled without prejudice. Claim 3 has been amended to depend from claim 1.

Independent claim 1, as amended, recites limitations not taught, shown or suggested *Woodruff*. *Woodruff* teaches an electrochemical cell having backing

RESPONSE TO OFFICE ACTION  
S/N 09/905,513  
Page 13 of 19

member 46 that holds a wafer against a contact portion 42 of a contact ring 34. The contact portion is utilized to establish electrical contact with the wafer. The contact ring includes annular seal member 36 having a lip 50. The lip extends radially inward and upward from the bottom of the contact ring to contact the wafer inward of the contact portion, thereby shielding the wafer from processing fluids. However, *Woodruff* does not teach, show or suggest a first seal having a base disposed in a groove at least partially formed in a contact ring and a lip extending from the base and flaring radially outward towards contact pads disposed on the contact ring, as recited by claim 1.

Thus, the Applicant submits that independent claim 1 and claims 3-4 and 9-10 depending therefrom are patentable over *Woodruff*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**B. 35 U.S.C. §102(b) Claims 22-26**

Claims 22-26 stand rejected as being anticipated by United States Patent No. 5,807,469 issued September 15, 1998 to *Crafts et al.*, (hereinafter referred to as "*Crafts*"). In response, the Applicant has amended claim 22 to more clearly recite aspects of the invention.

Independent claim 22, as amended, recites limitations not taught, shown or suggested *Crafts*. *Crafts* teaches a cathode contact device having an annular conductive continuous contact 202 for making continuous electrical contact with a workpiece. The annular conductive continuous contact includes a plurality of conductive arms 214 extending radially outwards from the conductive contact. A dielectric layer 226 is bonded to one side of the conductive continuous contact to form a clad laminate. Two dielectric layers 230 and 232 may laminate the arms 214. However, the top annular surface of the conductive continuous contact remains uncovered by insulative material. Therefore, *Crafts* does not teach, show or suggest an annular conductive body having a top surface, an outer diameter and a bottom surface coupled to the outer diameter opposite the top surface, the outer diameter and bottom surface at least partially covered by a insulative coating; the top surface includes a flange, a substrate seating surface and a shoulder disposed between the flange and the substrate seating surface, and at least one exposed conductive pad disposed on the

RESPONSE TO OFFICE ACTION  
S/N 09/905,513  
Page 14 of 19

substrate seating surface, wherein the flange is at least partially covered by the insulative coating, as recited by claim 22.

Thus, the Applicant submits that independent claim 22 and claims 23-27 depending therefrom are patentable over *Crafts*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**C. 35 U.S.C. §103(a) Claim 5-8**

Claims 5-8 stand rejected as being unpatentable over *Woodruff* in further view of United States Patent No. 5,885,469 issued March 23, 1999 to *Kholodenko et al.*, (hereinafter referred to as "*Kholodenko*"). In response, the Applicant has amended claim 1, from which claims 5-8 depend, to more clearly recite aspects of the invention.

Independent claim 1, as amended, recites limitations not taught, shown or suggested by *Woodruff* and *Kholodenko*. The teachings of *Woodruff* have been discussed above. *Kholodenko* teaches an electrostatic chuck having a flex circuit 120 for supporting wafer 111. The flex circuit includes dielectric layer 116 that separates the wafer from a conductive layer 112. A contact area 103 of the dielectric layer seals the periphery of the wafer when power is applied to the chuck.

However, as *Kholodenko* describes an electrostatic chuck that is electrically insulated from a wafer supported thereon, *Kholodenko* cannot be combined with the teachings of *Woodruff* which provides electrical contact with a workpiece to yield the claimed invention. Therefore, there is no suggestion or motivation to combine the teachings of *Kholodenko* with *Woodruff*. Moreover, *Kholodenko* cannot provide a third seal to the apparatus of *Woodruff* as the third seal recited by claims 5-8 is disposed between a thrust plate and contact ring while *Kholodenko* seal is with the wafer.

Thus, the Applicant submits that independent claim 1, and claims 5-8 depending therefrom are patentable over *Woodruff* in view of *Kholodenko*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**D. 35 U.S.C. §103(a) Claims 11-13 and 15**

Claims 11-13 and 15 stand rejected as being unpatentable over *Woodruff* in view of *Kholodenko*. The Applicant respectfully disagrees.

RESPONSE TO OFFICE ACTION  
S/N 09/905,513  
Page 15 of 19

Independent claim 11 recites limitations not taught, shown or suggested by *Woodruff* and *Kholodenko*, along or in combination. As discussed above, the combination of *Woodruff* and *Kholodenko* is not proper as *Woodruff* teaches conductively contact a substrate while *Kholodenko* teaches to contact the substrate with a dielectric material. Moreover as additionally discussed above, the combination of *Woodruff* and *Kholodenko* cannot yield three seals arranged as recited by claim 11.

Thus, the Applicant submits that independent claim 11, and claims 12-13 and 15 depending therefrom are patentable over *Woodruff* in view of *Kholodenko*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**E. 35 U.S.C. §103(a) Claim 14**

Claim 14 stands rejected as being unpatentable over *Woodruff* in view of *Kholodenko* as applied to claim 11 above, and in further view of *Crafts*. The Examiner asserts a conductive ring, as composed from the *Woodruff* - *Kholodenko* combination, comprised of conductive material covered by an insulative material, as taught by *Crafts*, renders claim 14 obvious. The Applicant respectfully disagrees.

As discussed above, independent claim 11 recites limitations not taught, shown or suggested by *Woodruff* and *Kholodenko*, along or in combination. As further discussed above, the combination of *Woodruff* and *Kholodenko* is not proper as *Woodruff* teaches conductively contact a substrate while *Kholodenko* teaches to contact the substrate with a dielectric material. Moreover as additionally discussed above, the combination of *Woodruff* and *Kholodenko* cannot yield three seals as recited by claim 11.

*Crafts* is also not combinable with *Kholodenko* for the same reasons discussed above. Additionally, *Crafts* does not teach a seal disposed between a thrust plate and contact ring which would provide a third seal to the apparatus of *Woodruff*. Thus, any combination of *Woodruff*, *Kholodenko* and *Crafts* does not teach or suggest the limitations of claim 11, or claim 14 that depends therefrom.

Therefore, the Applicant submits that claim 14 is patentable over *Woodruff* in view of *Kholodenko* and in further view of *Crafts*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

RESPONSE TO OFFICE ACTION  
S/N 09/905,513  
Page 16 of 19

**F. 35 U.S.C. §103(a) Claims 16-18**

Claims 16-18 stand rejected as being unpatentable over *Woodruff* in view of *Crafts*. In response, the Applicant has amended claim 16 to more clearly recite aspects of the invention.

Independent claim 16, as amended, recites limitations not taught, shown or suggested by *Woodruff* and *Crafts*, along or in combination. As discussed above, *Woodruff* teaches a contact ring that includes annular seal member having a lip. The lip extends radially inward and upward from the bottom of the contact ring to contact the wafer inward of the contact portion, thereby shielding the wafer from processing fluids. However, as the lip extends inwardly, upon separation from the wafer, the lip moves outward, not inward as recited by claim 16. Additionally, *Crafts* does not teach, show or suggest a first means for sealing a contact ring to a feature side of the substrate and for wiping the feature side of the substrate in a radially inward direction when disengaged from the substrate, as recited by claim 16.

Thus, as *Crafts* does not teach or suggest a modification of the lip of *Woodruff* that would result in a first means for sealing a contact ring to a feature side of the substrate and for wiping the feature side of the substrate in a radially inward direction when disengaged from the substrate, the combination of *Woodruff* and *Crafts* does not teach or suggest the limitations of claim 16 and claims 17-18 that depend therefrom. Thus, the Applicant submits that claims 16-18 are patentable over *Woodruff* in view of *Crafts*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**G. 35 U.S.C. §103(a) Claims 19-20**

Claims 19-20 stand rejected as being unpatentable over *Woodruff* in view of *Crafts*, as applied to claim 16 above, and in further view of *Kholodenko*. The Examiner asserts a conductive ring, as composed from the *Woodruff* - *Crafts* combination, having three seals, as taught by *Kholodenko*, renders claim 19-20 obvious. In response, the Applicant has amended claim 16 to more clearly recite aspects of the invention.

As discussed above, independent claim 16, as amended, recites limitations not taught, shown or suggested by *Woodruff* and *Crafts*. As additionally discussed above,

## RESPONSE TO OFFICE ACTION

S/N 09/905,513

Page 17 f 19

*Kholodenko* is not combinable with *Woodruff* or *Crafts*. Moreover, *Kholodenko* does not teach a third seal that may be combined with the apparatus of *Woodruff* or *Crafts*.

Therefore, *Woodruff*, *Crafts* and *Kholodenko* do not teach or suggest the limitations of claim 16 and claims 19-20 that depend therefrom. Thus, the Applicant submits that claims 19-20 are patentable over *Woodruff* in view of *Crafts*, and in further view of *Kholodenko*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**G. 35 U.S.C. §103(a) Claim 27**

Claim 27 stands rejected as being unpatentable over *Crafts* as applied to claim 22 above, and in further view of *Kholodenko*. The Examiner asserts a conductive ring, as taught by *Crafts*, which includes a plurality of pads, as taught by *Kholodenko*, renders claim 14 obvious. The Applicant respectfully disagrees.

As discussed above, independent claim 22 recites limitations not taught, shown or suggested by *Crafts*. As further discussed above, the combination of *Crafts* and *Kholodenko* is not proper as *Crafts* teaches conductively contact a substrate while *Kholodenko* teaches to contact the substrate with a dielectric material. Even if *Crafts* and *Kholodenko*, were combined, the resultant apparatus would have a conductive contact ring, covered by a dielectric layer that has a plurality of dielectric substrate supporting pads, which would render the apparatus of *Crafts* inoperable for its intended purpose (e.g., applying an electrical bias to a substrate seated thereon.).

Therefore, the Applicant submits that claim 27 is patentable over *Crafts* in view of *Kholodenko*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

**NEW CLAIMS**

New claims 46-51 have been added. The Applicant believes that claims 46-50 are fully supported by the specification and no new matter has been entered. As claims 46-50 depend from claims 22 and 11 which are allowable for the reasons discussed above. Claim 51 recites limitations patentable over the art of record. Thus, the Applicant respectfully requests allowance of these claims.

RESPONSE TO OFFICE ACTION  
S/N 09/905,513  
Page 18 of 19

### NEW CLAIMS

New claims 46-51 have been added. The Applicant believes that claims 46-50 are fully supported by the specification and no new matter has been entered. As claims 46-50 depend from claims 22 and 11 which are allowable for the reasons discuss above. Claim 51 recites limitations patentable over the art of record. Thus, the Applicant respectfully requests allowance of these claims.

### ALLOWED CLAIMS

The Applicant thanks the Examiner for his comments regarding the allowability of claim 21.

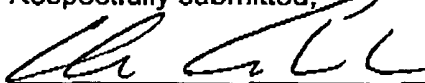
### CONCLUSION

Thus, the Applicant submits that all claims now pending are in conditlon for allowance. Accordingly, both reconsideration of this application and its swift passage to issuance are earnestly solicited.

If, however, the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone Mr. Keith Taboada at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

*Aug 22, 2003*

Respectfully submitted,

  
KEITH TABOADA, Attorney  
Reg. No. 45,150  
(732) 530-9404

Moser, Patterson & Sheridan, LLP  
595 Shrewsbury Avenue  
Suite 100  
Shrewsbury, NJ 07702

Please continue to send all correspondence to:

Patent Counsel  
Applied Materials, Inc.  
P.O. Box 450A  
Santa Clara, CA 95052

RESPONSE TO OFFICE ACTION

S/N 09/905,513

Page 19 of 19

**CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8**

I hereby certify that this correspondence is being transmitted by facsimile under 37 C.F.R. §1.8 on August 22, 2003 and is addressed to the Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Facsimile No. (703) 872-9310.

Signature

Allyson M. DeVesty  
Printed Name of Person Signing8-22-03  
Date of signature